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| 10/629,375 | 07/28/2003 | Fang Hao | Hao 1-2-4 (LCNT/125103) | 6538 |
| 46363 7590 09/19/2007 PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702 | | | EXAMINER WILSON, ROBERT W | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/629,375

Applicant(s)

HAO ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8, 10-29 are rejected under 35 U.S.C. 102(E) as being anticipated by Chen (U.S. Patent No.: 6,567,380) and RFC 1771 as extrinsic evidence which is incorporated by reference per col. 5 line 59 to 61.

Referring to claim 1, Chen & RFC 171 teach: a method for improved inter-domain routing convergence (Router per Fig 3 performs the method utilizing the message formats per Figs 5 & 6 of Chen) comprising: transmitting reason information associated with a route update or withdraw (Router per Fig 3 transmits message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information)

In addition Chen & RFC 171 teach:

Regarding claim 2, wherein said reason information transmitted along with said route update or withdraw (the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information is transmitted along with Withdraw (504 per Fig 5 of Chen)

Regarding claim 3, wherein said reason information is encoded as a triplet within a route update or withdraw message (the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 are a triplet)

Regarding claim 4, wherein the triplet comprises;

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A type code identifying the reason for the update or withdraw (local preference per RFC 171 per Pg 36 is a type code)

An indication of the a node pair associated with the update or withdraw (withdraw routes indicates an inherent pair of nodes per Fig 5 of Chen)

An updated cost of a link between the node pair associated with the update or withdraw (hop count per Pg 38 of RFC 171 indicates the cost of the link)

Regarding claim 5, wherein said reason information comprises reason selected from the group consisting of lost of peering between nodes and a change in the cost of a link between nodes (local preference per RFC 136 per Pg 36 would result from a loss of peering and hop count per Pg 38 of FC 171 (cost))

Regarding claim 6, wherein a node receiving said reason information uses said reason information to determine which of its candidate route are also affected by substantially the same even that triggered the initial route update or withdrawn and which of it candidate router are not affected (after receiving the routing update message the receiving route assess the routes in its routing table and based upon the local preference or best route as well as the other information determines which routes the table are affected per col. 6 line 50 to col. 8 line 25 of Chen)

Regarding claim 7, wherein a candidate route is considered as a transient route if said receive node determined from said reason information that the candidate route is to be updated or withdrawn (Upon receipt of the routing message the receiving router determines the candidate route is to be updated or withdrawn per col. col. 5 line 40 to col. 8 line 17 of Chen)

Regarding claim 8, wherein said receiving node avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors (The receiving router receives a MED value which is used to as part of the assessment in determining of a local preference per col. 6 line 1 to 67 of Chen)

Regarding claim 10, further comprising transmitting version information for the route update or withdraw (Version Pg 8 of RFC 171)

Regarding claim 11, wherein the version information comprises a version of the update or withdraw for each node pair and the change in node pairs form the route previously advertised (Version per Pg 8 of RFC 171 applies to all update messages)

Regarding claim 12, wherein a node receiving said version information uses said version information to determine the stability of its candidate router (Chen per col. 6 lines 10 to col. 8 line 9)

Regarding claim 13, wherein a candidate route is considered as a transient route if a reason's version is greater than the version corresponding node pair in a path of the candidate route being considered (Chen per col. 6 lines 10 to col. 8 line 9)

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Regarding claim 14 wherein said receiving node avoids advertising a candidate route considers as transient route as a preferred route to its neighbors (Chen per col. 5 line 40 to col. 8 line 9)

Referring to claim 15, Chen & RFC 171 teach: a apparatus for improved inter-domain routing convergence (Transmitting Router & receiving router per Fig 1 which are shown individually per Fig 3 or apparatus of Chen) comprising:

means for transmitting reasoned information associated with a route update or withdraw to neighboring apparatus (Network Interface or means for transmitting per Fig 3 which is in the Router per Fig 3 of Chen transmits message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information) are sent to neighbors apparatus per Fig 1 of Chen

In addition Chen & RFC 171 teach:

Regarding claim 16, further comprising:

means for receiving reason information associated with a received update or withdrawn (Network Interface per Fig 3 or means for receiving update or withdraw. Router per Fig 3 receive message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information)

means for using said received reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The ROUTE PROCESSOR per Fig 3 or means for reasoning and determining. The receiving router uses the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 17, wherein said candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 18, wherein the apparatus avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference)

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Regarding claim 19, further comprising means for transmitting version information for the route update or withdraw (NETWORK INTERFACE per Fig 3 (means for transmitting) and Version Pg 8 of RFC 171)

Regarding claim 20, further comprising:

means for receiving version information; with an update or withdraw (NETWORK INTERFACE per Fig 3 or means for receiving) and

means for using said received version information to determine the stability of its candidate routers (ROUTE PROCESSOR per Fig 3 (means for using) and RFC 1771 teaches receiving version number and Chen teaches determining stability based on version per col. 6 lines 10 to col. 8 line 9)

Regarding claim 21, wherein a candidate route is considered as a transient route if said apparatus determined from said received version information that the reasons's version is greater than the version of a corresponding node pair in a path of the candidate route being considered (Chen version processing per col. 6 lines 10 to col. 8 line 9)

Regarding claim 22, wherein said apparatus avoids advertising a candidate router considered as a transient route as a preferred route to its neighbors (Chen transient route processing per col. 5 line 40 to col. 8 line 9)

Referring to claim 23, Chen & RFC 171 teach: a communication network having improved interdomain routing convergence (Fig 1 per Chen or network) comprising a plurality of network devices (Fig 1 of Chen has a plurality of routers or network devices) each of said network devices comprising a processor and a memory (Each of the routers per Fig 1 are represent by Fig 3 which has a processor and a memory)

Transmitting reasoned information associated with a route update or withdraw to neighboring apparatus (Router per Fig 3 of Chen transmits message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information) are sent to neighbors apparatus per Fig 1 of Chen

receiving a reason information associated with a received update or withdraw (Router per Fig 3 receive message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information) and

using said received reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The receiving router uses the combination of local

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prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 24, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 25, wherein the said network devices avoid advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference)

Referring to claim 26, Chen & RFC 171 teach: computer readable medium for storing a set of instructions (Memory per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen) wherein said instructions are executed on a processor (Processor per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen)

receiving a reason information associated with a received update or withdraw (Router per Fig 3 receive message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information) and

Regarding claim 27, wherein the method further comprises: receiving reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The receiving router uses the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 28, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 29, wherein the said network devices avoid advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 & 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S. Patent No.: 6,567,380) and RFC 1771 as extrinsic evidence which is incorporated by reference per col. 5 line 59 to 61.

Referring to claim 12, Chen (U.S. Patent No.: 6,567,380) and RFC 1771 as extrinsic evidence which is incorporated by reference per col. 5 line 59 to 61 teach: the method of claim 10 and wherein a node receives said version information (Version information is sent as a part of update or withdraw message)

Chen and RFC 1771 as extrinsic evidence do not expressly call for: using version number to determining stability of a candidate route

Chen and RFC 1771 teach: Version information is sent as a part of update or withdraw message which denotes the version number of the software.

It would have been obvious to one of ordinary skill in the art at the time of the invention that if the version number associated with the update or withdraw message is a old version that all of the data received as a part of this message may no be stable because the version may be incompatible between the nodes.

Referring to claim 20, Chen (U.S. Patent No.: 6,567,380) and RFC 1771 as extrinsic evidence which is incorporated by reference per col. 5 line 59 to 61 teach: the apparatus of claim 19 and further adapted to perform the steps of receiving version informaitohn with an update or withdraw (Version information is received as a part of update or withdraw message)

Chen and RFC 1771 as extrinsic evidence do not expressly call for: using version number to determining stability of a candidate route

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Chen and RFC 1771 teach: Version information is sent as a part of update or withdraw message which denotes the version number of the software.

It would have been obvious to one of ordinary skill in the art at the time of the invention that if the version number associated with the update or withdraw message is a old version that all of the data received as a part of this message may no be stable because the version may be incompatible between the nodes.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 15-22 are rejected under 35 U.S.C. 112, first paragraph, because they are directed to a single means claim. A single means claim is subject to undue breadth (Refer to In re Hyatt for details)

Referring to claims 15 & 19, these claims are directed to the single means of transmitting.

Response to Amendment

7. Applicant's arguments filed 7/20/07 have been fully considered but they are not persuasive.

The examiner respectively disagrees with the applicant argument that the reference does not expressly call for: transmitting reason information associated with a route update or withdraw.

The applicant has broadly claimed "reason information". The applicant has not claimed "Reasoned information which contains a text description of the reason for the update or withdrawn.

The reference teaches: Chen and RFC 171 teach Router per Fig 3 which transmit message formats which are both router update and withdraw messages with the local preference per RFC 171 per Pg 36 and path attributes per Fig 5 of Chen and hop count (cost) per Pg 38 per RFC or reason information. Chen and RFC 171 clearly teach message which is received as well as transmitted which when the router reads the message it recognizes the portions of the message which are updates and interprets those part of the message which indicate a reason to withdraw.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571/272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson
Examiner
Art Unit 2616

RWW
9/11/07